Department of Computer Architecture

Project team: 35@DCA	**1. BEng Piotr Śmiechowski - leader** **2. BEng Sylwester Frączek** **3. BEng Tomasz Kadzikowski** **4. BEng Maciej Wenta**
Supervisor:	**MEng Karol Draszawka**
Client:	**Mateusz Marmołowski (CTAdventure Sp. z o.o.)**
Date:	**02.2015**
Key words:	**Gesture recognition**

PROJECT TITLE:

Hand gesture recognition using a regular webcam.

OBJECTIVES AND SCOPE:

Develop a project to expand a product of CTAdventure which will allow for control by hand gestures in an interactive game Professor Why.

1. The development of an algorithm enabling the detection of characteristic points of the hand.
2. Development of application used to recognize hand gestures.
3. Getting recognized hand into the virtual reality in game.
4. Preparation of documentation.

RESULTS:

1. Determining the project specification with the company which commissioned the project.
2. Review and implementation of existing solutions.
3. Develop own algorithm to detect characteristic points of the hand.
4. Implementation of the base of a system which will allow to detect hand movement.
5. Parameterization of hand image.
6. Develop a DLL that returns the hand gestures.
7. Development of a computer game that allows the player to control the hand.

MAIN FEATURES, FUTURE WORKS:

Characteristics:
1. Detection of hand gestures.
2. The ability to control the game by hand.
3. Simple, user-friendly interface.